Work Orde December-17-13		83 D 8	556-	1.	*110)383*						Page 1
Revision ID:	D3556-1 Clamp For R44 B	В	1103	30	Accept	*N900	040	100)* s	etup Sta Sto		S1*
Start Date: Required Date: Reference:		tart Qty: 40.00 Req'd Qty: 40.00		*40* *40*	*50*	Cust Item I Customer:	D:					
Approvals:	Process Plan: QC:	W	Date:_		Tooling: SPC (Y/N):		ate:		R	tun Sta	/ 	R1* R2*
Sequence ID/ Work Center II		peration escription			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revisio	on Nbr										
D3556	Rev B											
100 *1 Waterjet	P	URCHASING Memo			0.00				50	_ ు	_	Ae 14.01.21
FLOW CNC Waterje	et .		প্ত	5								14.01.21
110	Q	C2- Inspect parts of	f machine FAI	FAIB	0.00							,
110 qc		Memo			0.00				_50			14.01.21

Quality Control

DQA:			Date:	WORK ORDER NON-CONFORMANCE / UPDATE											
QA Closed:			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / U		Wc	ork Ørder up	date only	7	AEROSPACE
QA CIUSEU.			Date.				-					11	· ·		
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	PROCESS		
	-		***			Rework			Skid-tube	Crosstube			Water Jet		Engineering
Part N	lo.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.		Quality
	•					Use-as-is		Thern	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR N	lo.					Suspected Unapproved			Large Fab	Composite			Supplier		
			,												
Root					Desc	ription of work order update	1	nitial		tion		Sign &		-	
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	4	QC Inspector
Design	_													-	
Doc/Data	_									•					
Equip/Tooling	_													l	
Handling/Pre						·									
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Oliapproved			L		<u> </u>		FΔI	ULT CΔ'	TEGORY			<u> </u>			
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		Bending				Bend] Folio/f	Program			Outside Dim	ensions	\neg	Pressure/Forced
		Centre No	ot Concer	ntric		BOM/Route	\vdash	Grain				Over/Under	_	_	Set-up
	H	Cracks				Broken/Damage/Defect		Hardwa	are			Part Incorre	H-	_	Temperature/Cure
		Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/L	Jngualified		Part Lost/Mi	ssing	_	Weld
		Cuffs				Contamination		1 .	tions Incomplete,	•		Part Moved	- -	7	Wrong Stock Pulled
Į.	Crushing Countersink				Countersink		-	gned/off center			Positioned V	Vrong			
	Heat Treat Cut Too Short					Mislab	_			Power Loss/	Surge [Other		
	Inspection Strip in Tube Drawing						Misrea	d	•						
	Marks/Chatter Drill Holes					Off-set									
Turning Sequence Finish						Out of	Calibration								
	Wave/Twist in Tube Fit/Function Out of Sequence														

Work Ord				*110	383*					74.		Page 2
December-17-1 Item ID: Revision ID: Item Name:	D3556-1 Clamp For R			Accept	*N900	040	100)*	Setup	Start Stop		S1* S2*
Start Date: Required Date Reference:	12/17/13 2: 12/17/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item I Customer:	D:						
Approvals:	Process Pl	lan:	Date:	Tooling: SPC (Y/N):		ate:			Run	Start Stop	171	R1* R2*
Sequence ID/ Work Center 1 120 *1 20* QC Quality Control	ID	Operation Description QC8- Inspect parts - seco	nd check	Set Up/ Run Hones 0.00 27 9-59	Tool ID	Tool#	Plan Code	Accept Qty SO,	t Rej Qty		Reject Number	Insp. Stamp
130 *120* Small Fab		Small Fab Memo		0.00		DAS 30 9-89		50				146

140

Small Fab

QC5- Inspect part completeness to step on W/O

1- Bend as per dwg

0.00

DAS 27

140

Memo

0.00

 $\frac{30}{0.2}$

QC

Quality Control

DQA:	WORK ORDER NON-CONFORMANCE / UPDATE WORK ORDER NON-CONFORMANCE / UPDATE									TRAGE			
			5.			WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE	14/	C	dete entr	AEROSPACE
QA Closed:			Date:							w	ork Order up	date only	
Work Orde	r:					DISPOSITION		i	AGAIN	ST DE	PARTMENT	/PROCESS	
	-	:	· · · · · · · · · · · · · · · · · · ·		_	Rework	1		Skid-tube Crosstul	ре]	Water Jet	Engineering
Part N	lo.					Scrap			Machining Small F		Pro	d. Eng. Coor.	Quality
	•				_	Use-as-is			noforming Finishi	ng 🗀	4	re/Packaging	Other
NCR I	۱o.					Suspected Unapproved	l		Large Fab Composi	te	1	Supplier	
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Root					Desci	ription of work order update	Πī	nitial	Action		Sign &		·
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
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	\vdash	Centre No	nt Cancar	ntric	-	BOM/Route	├	Grain	riogram	\vdash	Over/Under	-	Set-up
		Cracks	or concer	itric	\vdash	Broken/Damage/Defect	\vdash	Hardwa	are	-	Part Incorre		Temperature/Cure
	\vdash	l	ak/Binnla	ΛMayo		Burrs	\vdash	4	ion Incomplete/Unqualified	<u> </u>	Part Lost/M	<u> </u>	Weld
				Contamination	\vdash	- 1	tions Incomplete/Unclear	\vdash	Part Moved	· ·	Wrong Stock Pulled		
		Crushing			-	Countersink	\vdash	4	gned/off center		Positioned V		
				Cut Too Short		Mislab			Power Loss/	_	Other		
	\vdash	Inspection		Tube		Drawing		Misrea		_	_ = :: =: =====,		
		Marks/Ch				Drill Holes		Off-set					
	\vdash	1			-	Finish		-1	Calibration				
Turning Sequence Wave/Twist in Tube					Fit/Function		Out of	Sequence					

Work Order ID 110383

110383

Page 3 December-17-13 9:24:46 AM Accept Item ID: D3556-1 *N900040100* Setup Start **Revision ID: Item Name:** Clamp For R44 Bearpaw **Start Date: ***40* 12/17/13 **Start Oty: 40.00 Cust Item ID:** Required Date: 12/17/13 Reg'd Oty: 40.00 *40* **Customer:** Reference: Run Start Process Plan: Date: Tooling: **Approvals:** Date: Stop OC: Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Insp. Accept **Work Center ID** Description **Qty** Oty Stamp **Run Hours** Code Number 150 Identify as per dwg & Stock Location: 0.00 *150* Packaging 0.00 Memo **Packaging** 160 QC21- Final Inspection - Work Order Release 0.00 M14-01-22 *160* OC 0.00 Memo Quality Control

DQA:			Date:				DART								
						WORK ORDER NON	-CC	ONFO	RMANCE / UP				_	_	AEROSPACE
QA Closed:			Date:								W	ork Order up	date only		
Work Orde	`r·					DISPOSITION				AGAINST	DE	PARTMENT,	/PROCESS		
WOIK OIG	-				'	Rework	1		Skid-tube	Crosstube			Water Jet		Engineering
Part N	lo.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.	\dashv	Quality
	٠٠.					Use-as-is			noforming	Finishing			re/Packaging		Other
NCR I	No.					Suspected Unapproved			Large Fab	Composite		·	Supplier		
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Root					Desci	ription of work order update	ı	nitial	Actio			Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descri	ption		Date	Verification	1	QC Inspector
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Material	Н														
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		Bending				Bend		Folio/I	Program		L	Outside Dim	ensions		Pressure/Forced
		Centre No	ot Concer	ntric	L	BOM/Route	<u></u>	Grain				Over/Under	tolerance		Set-up
		Cracks				Broken/Damage/Defect		Hardw	are			Part Incorre	ci [Temperature/Cure
		Crimp/Kiı	nk/Ripple	/Wave		Burrs	L	Inspect	tion Incomplete/Un	qualified		Part Lost/M	issing		Weld
<u> </u>	L	Cuffs				Contamination	L	4	tions Incomplete/U	nclear	_	Part Moved	L		Wrong Stock Pulled
		Crushing				Countersink		-1	gned/off center		_	Positioned \			1
	L	Heat Trea				Cut Too Short	\perp	Mislab			L	Power Loss/	'Surge		Other
	L	Inspectio		Tube		Drawing	<u>_</u>	Misrea							
	L	Marks/Cl				Drill Holes	\vdash	Off-set							
		Turning S	-			Finish	\vdash	4	Calibration			~			
		Wave/Tw	vist in Tub	oe		Fit/Function	1	Out of	Sequence						

December-17-13 9:24:46 AM

Work Order ID:

110383

Parent Item:

D3556-1

Parent Item Name:

Clamp For R44 Bearpaw

Start Date: 12/17/13

Required Date: 12/17/13

Start Qty: 40.00

Required Qty: 40.00

Comments:

IPP Rev:A New Issue 07-03-23 JLM

IPP Rev:B 08-07-28 per dwg revb (ecn 08-506) DD verified by:EC IPP Rev C 11.07.14 now in-

house EC verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location		Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No				sf	210.6540		1.6		1-	41.01.
304/316 Sheet .063									c			75	14.01.
				Location		Loc Oty	<u>Lo</u>	c Code					
				MAT020		210.6539998							
					123136	140.2				,			
					M126159	25.94							
					M126915	44.514							

DQA:			Date:		-	- WART							
						WORK ORDER NON-	-CC	NFO	RMANCE / UPDATE				AEROSPACE
QA Closed:			Date:							W	ork Order up	date only	
Work Orde	r.					DISPOSITION			AGAINS	T DE	PARTMENT	/PROCESS	
WOIR Olde	' · -				_	Rework	1		Skid-tube Crosstub	eГ]	Water Jet	Engineering
Part N	o.					Scrap			Machining Small Fa	_	Pro	d. Eng. Coor.	Quality
	-				_	Use-as-is			noforming Finishir	\vdash	4	re/Packaging	Other
NCR N	lo.					Suspected Unapproved			Large Fab Composit	te		Supplier	
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Root		D-4-	Cham		Desci	ription of work order update		nitial	Action		Sign & Date	Verification	QC Inspector
Cause	\dashv	Date	Step	Qty		or non-conformance	CII	ief Eng	Description		Date	Verification	QC IIIspector
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		Bending				Bend	\vdash	-i '	Program	\vdash	Outside Dim		Pressure/Forced
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		Cracks	1 (5)		<u> </u>	Broken/Damage/Defect	-	Hardw		\vdash	Part Incorre	-	Temperature/Cure Weld
		Crimp/Kir	nk/Rippie	:/wave	-	Burrs	\vdash	• •	tion Incomplete/Unqualified	-	Part Lost/M Part Moved	issing	Wrong Stock Pulled
		Crushing			\vdash	Contamination Countersink	\vdash	4	tions Incomplete/Unclear gned/off center		Positioned V	Vrong ∟	TANOUE STOCK Lauren
		Crushing Heat Trea	1		-	Cut Too Short	-	Mislab		-	Power Loss/	_	Other
	-	Inspectio		Tube		Drawing	\vdash	Misrea		<u> </u>	J. 044C1 2033/		10000
	\vdash	Marks/Ch	•	1456	\vdash	Drill Holes	\vdash	Off-set			-		
		Turning S			-	Finish		-	Calibration				
		Wave/Tw				Fit/Function		-	Sequence				

DART AEROSPACE LTD	Work Order:	110345
Description: Clamp	Part Number:	D3556-1
Inspection Dwg: D3556 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.257	+/-0.010	. 258	_		√	JKm-05
0.375	+/-0.010	.37\$	_		V	
0.375	+/-0.010	.377	_		V	
0.75	+/-0.030	,75	-		٧	
0.450	+/-0.010	,450	_		V	
6.196	+/-0.010	6.196	<i>(</i> -		V	
7.09	+/-0.030	7.09			V	
0.063	+/-0.010	690,	_		V	
- 1						

			DAS		
Measured by:	Ae	Audited by:	27 9-89	Preliminary Approval:	
Date:	14.01.21	Date:	14-1-2	Date:	

Rev	Date	Change	Revised by	Approved
Α	12.05.14	New Issue	KJ OLY	11
			171	7

DQA:			Date:				DART							
						WORK ORDER NON-	-CC	ONFO	RMANCE / UPI					AEROSPACE
QA Closed:			Date:								Wor	k Order up	date only	
Work Orde	ır.					DISPOSITION				AGAINST [DEP	ARTMENT/	PROCESS	
WOIK OIG	•					Rework	ı		Skid-tube	Crosstube	\neg		Water Jet	Engineering
Part N	lo.					Scrap			Machining	Small Fab	\dashv	Proc	d. Eng. Coor.	Quality
, 4, 5,	•					Use-as-is		ĺ	noforming	Finishing	\exists		e/Packaging	Other
NCR N	lo.					Suspected Unapproved			- J	Composite		·	Supplier	
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Root					Desc	ription of work order update	- 1	nitial	Actio	n		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	otion		Date	Verification	QC Inspector
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	-	Centre No	ot Concer	ntric	-	BOM/Route	_	Grain			—1	Over/Under		Set-up
		Cracks	. /5: 1		\vdash	Broken/Damage/Defect	\vdash	Hardwa		!!:6!	_	Part Incorred	-	Temperature/Cure Weld
	\vdash	Crimp/Kii	пк/кірріе	/ wave	-	Burrs	-	1 '	tion Incomplete/Unq	· F	_	Part Lost/Mi Part Moved	souing –	Wrong Stock Pulled
		Crushing			\vdash	Countarion	-	4	tions Incomplete/Ur gned/off center	icieai	_	Positioned V	Vrong	TAALOUE STOCK LUILED
	H	Crushing			\vdash	Countersink Cut Too Short	\vdash	Mislab	-	-		Positioned v Power Loss/		Other
	-	Heat Trea		Tubo	\vdash	Drawing	\vdash	Misrea		L	'	OWEI LUSS/		Totalei
	_	Marks/Ch	-	rube		Drill Holes	\vdash	Off-set			-			
	-	Turning S				Finish	\vdash	4	Calibration	r	-			
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I	1	AAGAELIM	, is citi tul	·		11.19 1 01100011		100001	Jeguerite.					

NOTES: 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 16 GAUGE, PER MIL-S-5059 (REF DART SPEC M304S16GA) 2) FINISH: NONE
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) IDENTIFY WITH DART P/N D3556-1 USING FINE POINT PERMANENT IN MARKER

3.4 L DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

6. BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX

7.) PART IS SYMMETRIC ABOUT ©

8.) WEIGHT: 0.09 lbs

8

SHEET 1 NOTE 1 MATERIAL WAS MIL-S-5019. SHT 2 ZN B1 SLOT LENGTH WAS 0.357 (REF NCR 257). DRAWING TRANSFERRED TO "B" SIZE & UPDATED TO CURRENT STANDARDS. 08.07.11 NEW ISSUE Α CB 07.02.13 REV. DESCRIPTION BY DATE DESIGN DART AEROSPACE LTD DRAWN AJS HAWKESBURY, ONTARIO, CANADA DRAWING NO. CHECKED REV. B D3556 MFG. APPR. SHEET 1 OF 2 APPROVED TITLE SCALE CLAMP DE APPR NTS DATE

08.07.11

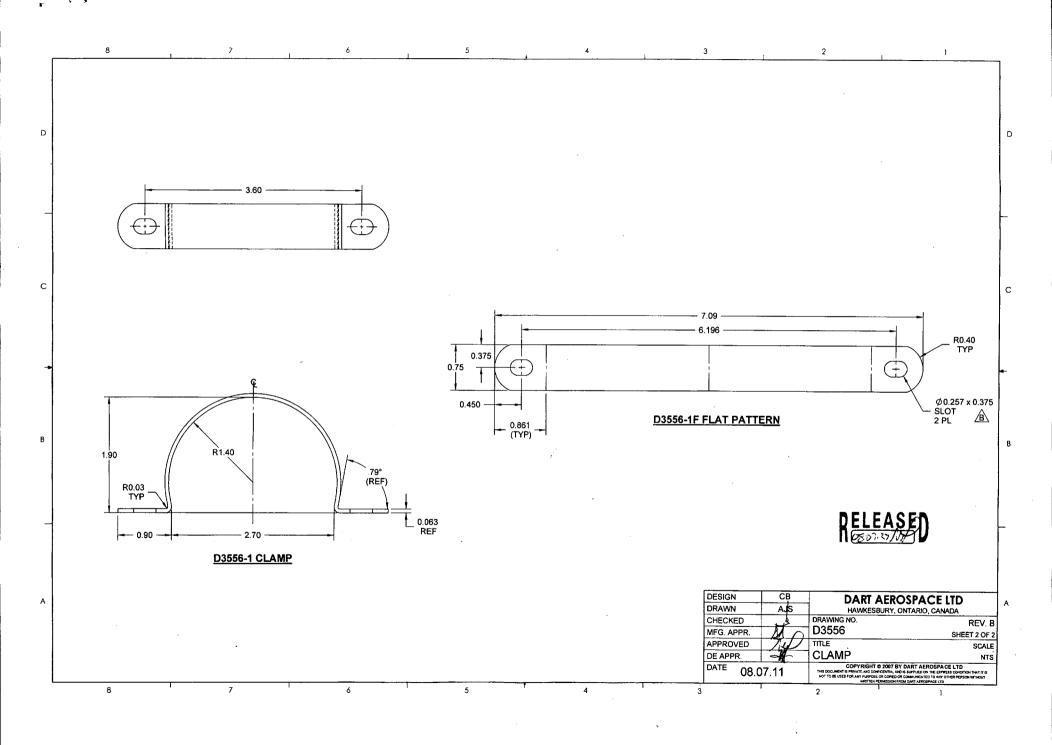
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NOT TO BE USED FOR ANY PURPOSE OR COMPRES OR COMMUNICATED TO ANY OTHER PRESS.

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DQA:			Date:										TQAG	
· · ·						WORK ORDER NON-CONFORMANCE / UPDATE								
QA Closed:		Date:					W	ork Order up	date only					
Work Order:						DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Work Orde	-				<u> </u>	Rework	ì	Skid-tube Crosstube				Water Jet	Engineering	
Part No.						Scrap			Machining Small Fab			d. Eng. Coor.	Quality	
rait ivo.					_	Use-as-is		Thermoforming Finish			Rec/Store/Packaging Other			
NCR No.						Suspected Unapproved			Large Fab Composite	_	Supplier			
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Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector	
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	_	Centre Not Concentric				BOM/Route	⊢		irain		Over/Under tolerance		Set-up	
		Cracks	or concer	itile	-	Broken/Damage/Defect	\vdash	Hardware		H	Part Incorrect		Temperature/Cure	
		Crimp/Kir	nk/Ripple	/Wave		Burrs	\vdash	Inspection Incomplete/Unqualified		H	Part Lost/Missing		Weld	
	\vdash	Cuffs		,		Contamination	\vdash	Instructions Incomplete/Unclear			Part Moved		Wrong Stock Pulled	
		Crushing				Countersink	\vdash	Misaligned/off center			Positioned V			
	Г	Heat Trea	ıt		1	Cut Too Short	Г	Mislabeled			Power Loss/Surge Other			
		Inspection		Tube		Drawing	Г	Misread			•	· L		
		Marks/Ch				Drill Holes		Off-set						
		Turning S	equence			Finish		Out of Calibration						
		Wave/Tw	ist in Tub	oe .		Fit/Function		Out of Sequence						



DQA:		Date:				TRAC							
Ot Slevel Bota				WORK ORDER NON-CONFORMANCE / UPDATE Work Order undate only									
QA Closed:			Date:			Work Order update only							
Work Order:					i	DISPOSITION			AGA				
Work orac					_	Rework		Skid-tube Crosstu				Water Jet	Engineering
Part No.						Scrap		Machining Small Fa			Pro	d. Eng. Coor.	Quality
						Use-as-is		Thermoforming Finishing			4	e/Packaging	Other
NCR No.						Suspected Unapproved		Large Fab Composit				Supplier	
Root					Desci	ription of work order update	Ī	nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
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Landi	ng (Gear				General							
	Ŭ	Bending				Bend		Folio/Program			Outside Dimensions		Pressure/Forced
		Centre Not Concentric				BOM/Route		Grain			Over/Under tolerance		Set-up
		Cracks				Broken/Damage/Defect		Hardware			Part Incorrect		Temperature/Cure
		Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspection Incomplete/Unqualified			Part Lost/Mi	ssing	Weld
		Cuffs				Contamination		Instructions Incomplete/Unclear			Part Moved		Wrong Stock Pulled
		Crushing				Countersink		Misaligned/off center			Positioned V	Vrong	_
		Heat Trea	at			Cut Too Short		Mislabeled			Power Loss/	Surge	Other
		Inspection	n Strip in	Tube		Drawing		Misread			···		
		Marks/Ch	natter			Drill Holes		Off-set					
		Turning S	equence	•		Finish		Out of Calibration					
		Wave/Tw	ist in Tuk	oe ·		Fit/Function		Out of Sequence					